RESOURCE MANAGEMENT

Five Year Forest and Range Resource Program 1989–1994

Province of
British Columbia
Ministry
of Forests

FIVE YEAR FOREST AND RANGE RESOURCE PROGRAM 1989-1994

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PART 1: INTRODUCTION

This report presents the programs of the Ministry of Forests. Its purpose is to inform the Legislative Assembly of the government's intentions regarding the management of British Columbia's forest and range resources over the next five years, from April 1, 1989 through March 31, 1994.

The forest and range resource program includes all ministry activities involved in the stewardship and use of the province's forest, range and recreation resources outside parks.

The management services program provides the human, financial and physical support services required by the forest and range resource program.

ORGANIZATION OF THE REPORT

Part 2 of this report discusses the ministry's mission and vision of the future.

Part 3 describes the ministry's programs and the role of the private sector in implementing the programs.

Part 4 provides a summary.

PART 2: THE MINISTRY OF FORESTS

THE MINISTRY'S MISSION

To manage and protect the Crown's forest and range resources to provide maximum economic and social benefits to all British Columbians.

The Ministry of Forests manages and protects forest and range resources on about 85% of the area of the province, consisting mostly of Crown (public) land and some private lands on which forest management is regulated by the ministry. The remaining 15% consists of bodies of water, parks, urban areas and private lands not regulated by the ministry.

Timber production, forage production for livestock, and recreational opportunities for residents and tourists are the primary uses of forests and rangelands. Other uses and values are important as well. These include watersheds for fish and drinking water, forage and habitat for wildlife, scenic values, and wilderness.

To ensure that British Columbians' diverse interests in the forest and range resources of the province are well served, now and in the future, the Ministry of Forests will incorporate two principles as central tenets of its programs:

Resource Stewardship

Stewardship ensures that the future value and productivity of the land base are not jeopardized in the pursuit of short term gains. Dynamic changes in the forest and range resources supported by the land base are expected and may even be desirable -- stewardship ensures that these changes are beneficial to society. The Ministry of Forests will document and communicate the requirements of good stewardship to the public and to resource managers in government and industry.

Integrated Resource Management

Integrated resource management addresses the potential uses of all forest and range resources. Today's management decisions either limit or improve the combinations of possible uses in the immediate and distant future. These decisions must consider market and non-market demands for the uses of forests and rangelands, both present and future. Since future demands, and the balances among them, are difficult to predict, decision-makers strive to avoid the loss of future options while addressing present needs.

A VISION OF THE FUTURE

The ministry's programs aim to achieve and maintain the following:

- Sustainable development for the province's forest and range resources.
  - Improved land use allocations and resource stewardship, based on economic and ecological principles and on society's preferences. Along with timber production, society is now demanding wilderness, wildlife diversity, attention to aesthetics, old growth reserves and recreation opportunities.
  - Forest renewal on all areas denuded by harvests and other causes.
  - Research that enables better integrated resource management, more successful forest renewal and increased productivity of the land base.

- A more diversified, competitive forest industry with expanded trading on world markets.
  - Maximum timber harvests from Crown and regulated private forest lands, subject to resource stewardship and integrated resource management considerations.
  - Increased efforts in product research, development and marketing.
  - Encouragement of additional manufacture in the province.

- A competitive ranching industry.
  - Provision of one million animal unit months (AUMs) of forage, subject to resource stewardship and integrated resource management considerations.

- A full spectrum of recreational opportunities.
  - Maintenance of an adequate distribution of roaded and unroaded recreation opportunities, subject to the access requirements of other resource uses that are of demonstrably higher value to society.

- Cost-effective program delivery.
  - Increased use of the private sector where benefits can be expected, without compromising government control of the resources.
  - Government revenues from commercial harvests of Crown timber will exceed government expenditures to maintain and sell the timber.

PART 3: PROGRAMS OF THE THE MINISTRY OF FORESTS

FOREST AND RANGE RESOURCE PROGRAM

This report is one of three required by the Ministry of Forests Act on forest and range resource management: A resource analysis is published periodically, with at most ten years between analyses; a resource program is updated annually; and, an annual report monitors progress.

The 1984 Forest and Range Resource Analysis assessed the condition of provincial forest and range resources, and reviewed the opportunities for their future use. It is a major source of information and analysis for the government's important task of developing and refining its resource use policies.

The resource program documents the government's intentions regarding forest and range management. The program is based, in part, on opportunities revealed in the resource analysis. The ministry implements the management objectives set out in the resource program and strives to achieve the government's goals at minimum cost.

The annual report records and evaluates the performance of the ministry in implementing the resource program.

These three documents provide a continuing public record of the ministry's assessment of issues in forest and range management, its goals and its management performance. Their purpose is to promote public awareness and understanding of how the forest and range resource assets of British Columbia are being managed. All three reports are available from Crown Publications Inc., 546 Yates Street, Victoria, British Columbia.

The new directions in forest policy described in last year's forest and range resource program for 1988-1993 have been incorporated in this resource program. The Small Business Forest Enterprise Program has been separated from the Harvesting Program, reflecting its increased significance and funding through a separate account.

The eight functions of the ministry which form the forest and range resource program are described below as eight programs.

Integrated Resource Management Program

The Integrated Resource Management Program ensures that all resource values are considered in the ministry's management of British Columbia's forests and rangelands, as required under Section 4(c) of the Ministry of Forests Act.

The program includes the activities of the Integrated Resources Branch in Victoria, and range, recreation and resource planning personnel in the region and district offices.

Forecast expenditure in 1989/90 has increased substantially to $15 million.

The Integrated Resource Management Program's three components, range, recreation and resource planning, are described next.

Range

The range component of the Integrated Resource Management Program provides stewardship, conservation, rehabilitation and enhancement of Crown provincial rangeland, 80% of which comprises land managed for timber production. Use of the range resource by livestock, wild ungulates, guide/outfitters, packers and others is integrated to minimize conflicts. The range component administers range tenures and recovers revenues from the ranching industry for the use of one million animal unit months (AUMs) of forage.

Major new initiatives, based on recommendations from the Range Program Review, will improve range stewardship. These include increased planning, inventory, monitoring of range condition, research, weed control and forage enhancement. Investments will also be made in maintaining and building fences, water developments and other facilities, to achieve efficient resource use.

Recreation

The recreation component has a twofold role of managing the recreation resource (protection of present and future recreation values, including wilderness, scenic landscapes, cultural and heritage landmarks) and managing its use, through the provision of safe, sanitary, socially acceptable and environmentally sound recreation facilities.

Goals for the next five years include:

- assessment of recreation resource values, use and expected demand,
- update of 100% of the provincial recreation inventory (1200 maps),
- transfer of 100% of the recreation inventory to the Inventory Program's computerized maps and database,
- approved objectives for visual quality (landscape management) in all forest management plans,
- approved objectives for a recreation opportunity spectrum in all forest management plans,

- a wilderness management plan for every designated wilderness area,
- recommendations regarding designation of new wilderness areas, and
- maintaining, servicing and if necessary rehabilitating all recreation sites and trails to minimum standards to meet public demand.

Resource Planning

The resource planning component provides guidelines, standards and strategic direction for provincial forests and rangelands. It prepares timber supply area (TSA) plans and reviews management plans prepared by industry for major licences. These plans include the allowable annual cut (AAC) determined by the Chief Forester, and set the strategy and actions required to meet the area's resource stewardship goals. Detailed, site-specific plans are prepared for some local areas where more planning is required. These and other efforts facilitate resolution of conflicts between competing demands for resources. The resource planning component also provides links with the planning processes of other ministries.

New funding will be used to increase the amount, quality and timeliness of resource planning, especially at the local level. Analytical concepts will be refined and field applications for geographic information systems will be developed.

Inventory Program

The Inventory Program maintains a comprehensive inventory of British Columbia's timber resources, and combines it with range and recreation inventories from the Integrated Resource Management Program, to provide computerized maps and a geo-referenced database to resource managers throughout the ministry, in outside agencies and in the private sector. Computer-assisted analyses of the supply of timber are provided to the Chief Forester to assist in the determination of allowable annual cuts.

Inventory Program goals for the next five years include:

- reinventory of 50% of the province's forests (over 3000 maps),
- two complete updates of timber depletions for the whole province,
- installation of a computerized geographic information system in all district offices,
- reconciling the annual timber harvests with the areas and volumes in the timber inventory, and
- assessing timber supply options for every forest management unit.

The program includes the activities of the Inventory Branch in Victoria and inventory personnel at the region and district levels. The private sector is used extensively, as is the specialized computer software developed by two British Columbia companies.

Forecast expenditure for 1989/90 is $14 million.

Harvesting Program

The Harvesting Program administers timber harvests under major licences (Crown and regulated private forest lands); bills licensees for Crown timber; administers the Forest Service road network; and, encourages industry to make the best possible use of the timber harvested.

Most of the provincial allowable annual cut (AAC) of 72 million m^3 is allocated to major licences. Cut controls permit some flexibility to respond to market conditions. Harvests under an individual licence may vary by plus or minus 50% on an annual basis, but must be within 10% of the cumulative AAC for a specified five year period. Any overcut is balanced by a corresponding undercut in the next five year period.

The Harvesting Program does not control the harvest from unregulated private, federal and other lands. Annual harvests from these lands have fluctuated between 4 and 14 million m^3 in the last decade.

Roads and reforestation under major licences are paid for by the licensee.

In Victoria, the Harvesting Program includes the activities of the Timber Harvesting and Valuation Branches. At each of the region offices, it includes the activities of timber administration, engineering and valuation personnel. At the district level, the program includes the activities of personnel for timber administration, scaling and engineering.

Forecast expenditure for 1989/90 is $56 million.

Small Business Forest Enterprise Program

The Small Business Forest Enterprise Program (SBFEP) sells Crown timber to businesses throughout the province. About 10 million m^3 annually are expected to be sold for the next five years.

The SBFEP has three principal objectives:

New Opportunities:	To provide an opportunity for individuals and small firms to enter the forest industry and establish new businesses.
Competition and Profit:	To market Crown timber on a competitive basis. This ensures that the most efficient firms are awarded the timber sales and that the province receives a fair return for its timber.
Diversification and Employment:	To sell timber for the production of specialty and higher-valued forest products, leading to further diversification of the forest industry and increased regional employment.

Over the next five years, increasing volumes of timber will be sold through "bid proposals" to promote the production of higher-valued forest products.

All revenues billed under the SBFEP flow into the Small Business Forest Enterprise Account. The ministry draws money from this account to administer the program, construct roads for future timber sales, and to reforest harvested areas. In effect, the SBFEP is a self-financing, profitable program. Revenue in excess of current expenditures and future basic silviculture requirements will be transferred to the government's General Fund.

The SBFEP's forecast expenditure is $63 million in 1989/90.

Construction of over 750 km of road in 1989/90, timber cruising and administration, account for nearly 80% of this expenditure.

Reforestation of areas harvested under the SBFEP is required by law. The cost of reforestation, or basic silviculture, accounts for 20% of the SBFEP forecast expenditure, up from 10% a year ago. Funding for basic silviculture is drawn from the Small Business Forest Enterprise Account. Basic silviculture goals, based on projected harvests, are shown in Table 3-A. Annual silviculture expenditures under the SBFEP are expected to double by 1992/93 and then stabilize.

Table 3-A:

Basic Silviculture Goals for the Small Business Forest Enterprise Program

	1989/90	1990/91	1991/92	1992/93	1993/94
			(hectares)		
Surveys	32 000	34 000	46 000	54 000	62 000
Site Preparation	27 000	25 000	26 000	24 000	24 000
Planting	6 000	20 000	21 000	23 000	23 000
Brushing	400	600	1 500	5 900	8 800
Spacing	100	300	300	300	600

Reforestation treatments typically occur over a number of years following harvest. Sufficient funds to pay the future costs of reforestation on all areas logged under the SBFEP are therefore kept in the Small Business Forest Enterprise Account. The SBFEP and its Account were established as of January 1, 1988, so the Account's balance is expected to increase rapidly during this five year program, from an opening balance of just over $30 million to over $80 million.

The SBFEP includes a minor expenditure for fire hazard control and pest management.

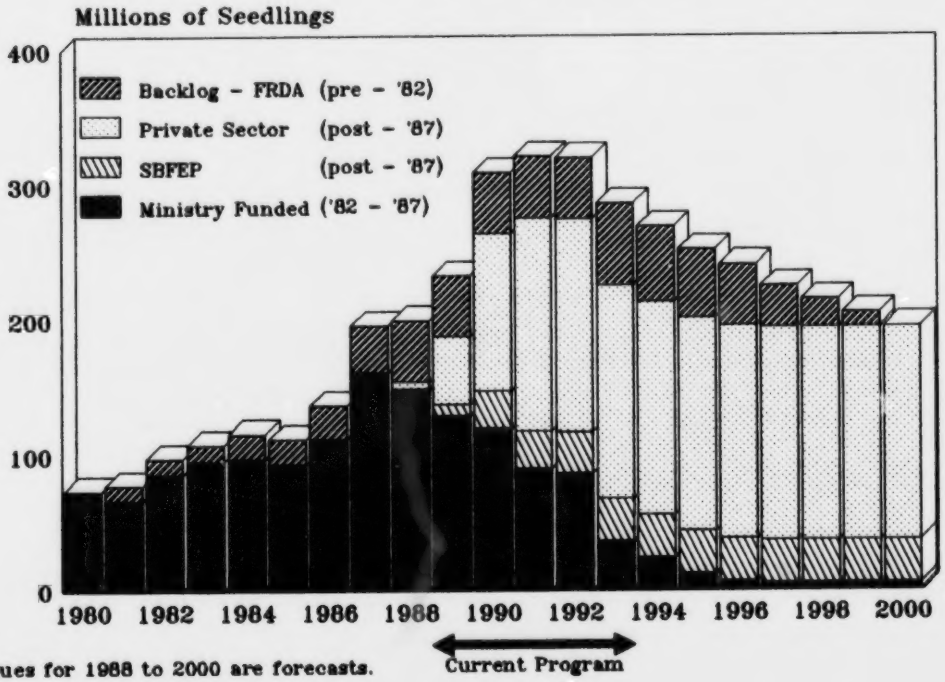
Silviculture Program

The Silviculture Program sets and monitors standards of reforestation on Crown and regulated private forest lands, reforests certain types of denuded Crown forest land, improves the value and productivity of the forest resource, and provides tree seed and seedlings.

Reforestation goals have increased dramatically in recent years. Planting has increased to 200 million seedlings annually, three times the level of only ten years ago. Over the next five years, planting levels are planned to increase to over 300 million seedlings annually. After this, planting levels are expected to decrease gradually and stabilize at about 200 million seedlings annually by the turn of the century.

As shown in the chart below, the expected increase in future planting levels, followed by a decrease, is due to the expected completion of reforestation on the areas harvested between 1982 and 1987, for which the ministry will provide funding, and on the backlog of not satisfactorily restocked (NSR) land that was harvested before 1982. By the turn of the century, virtually all reforestation in the province will be paid by the private sector, by holders of major licences and under the SBFEP. The Silviculture Program will still reforest areas denuded by fire and pests, but its primary task will be to guide and monitor the private sector's reforestation performance on Crown land.

Planting



Values for 1988 to 2000 are forecasts.

The Silviculture Program includes the activities of the Silviculture Branch in Victoria and the silviculture personnel at the regions, districts, three nurseries and 9 seed orchard sites.

Forecast expenditure in the Silviculture Program in 1989/90 is $240 million. This includes:

$159 million	- regular ministry funding
$ 73 million	- Canada-B.C. Forest Resource Development Agreement (FRDA)
$ 5 million	- Community Forests Program (Forest Stand Management Fund)
$ 3 million	- incremental silviculture to offset the loss of commercial timber in the South Moresby National Park Reserve
$240 million	

Additional expenditures under the SBFEP bring the total ministry expenditure related to silviculture to over $250 million.

The Silviculture Program's three components, basic silviculture, incremental silviculture, and nursery and seed operations, are described next.

Basic Silviculture

The basic silviculture component of the Silviculture Program sets and monitors standards of reforestation on Crown and regulated private forest lands, and restocks forest areas denuded by fire, pests and past timber harvests. Activities include surveys, site preparation, planting, brushing and spacing.

As of October 1, 1987, the financial responsibility for restocking areas harvested under major licences was shifted from the ministry's Silviculture Program to the private sector. Similarly, as of January 1, 1988, the cost of restocking areas harvested under other licences, which are now in the SBFEP, was shifted to the Small Business Forest Enterprise Account. The ministry will fund restocking of areas harvested between 1982 and these dates. It plans to complete the restocking with the goals shown in Table 3-B. Some residual activities will remain for future years, as will the ongoing reforestation of areas denuded by fire and pests.

Table 3-B:

Goals for Basic Silviculture Funded by the Ministry

	1989/90	1990/91	1991/92	1992/93	1993/94
			(hectares)		
Surveys	482 000	426 000	418 000	389 000	314 000
Site Preparation	70 000	70 000	68 000	28 000	19 000
Planting	105 000	95 000	73 000	68 000	28 000
Brushing	70 000	90 000	90 000	90 000	76 000
Spacing	11 000	13 000	14 000	15 000	15 000

Incremental Silviculture

The incremental silviculture component includes activities to restock the backlog of NSR forest land, and to improve the value and growth of immature forests. Activities include surveys, site rehabilitation, backlog planting, brushing, conifer release, spacing and fertilizing.

Goals for these activities are shown in Table 3-C. The FRDA goal for backlog planting is projected at approximately the same level in the chart on page 10. The goals for South Moresby forest replacement represent a small portion of the total task and the available funding. The goals for the Community Forests Program are preliminary. They are dependent on cost-sharing proposals from municipalities and regional districts.

The incremental silviculture goals for 1990/91 through 1993/94 will depend on an extension or replacement of FRDA beyond its expiry at the end of 1989/90. The current agreement will substantially reduce the backlog of NSR forest land on good and medium sites.

Table 3-C:

Goals for Incremental Silviculture in 1989/90

	FRDA	South Moresby	Community Forestry
	(hectares)		
Surveys	161 000	26 800	-
Site Rehabilitation	33 000	100	-
Backlog Planting	35 000	-	-
Brushing	7 000	900	1 500
Conifer Release	2 000	-	800
Spacing	13 000	1 500	3 500
Fertilizing	11 000	1 000	-
Other	-	-	1 700

Nursery and Seed Operations

The nursery and seed operations component grows and registers tree seed, and grows seedlings. For all seedlings planted on Crown land, seed collected from seed orchards and natural stands is stored in the ministry's seed centre in Surrey. The cost of seed is borne by the industry.

The ministry and the private sector will continue to expand seed orchard facilities to produce genetically improved seed for 40 million and 80 million seedlings for coastal and interior planting, respectively, by the year 2000.

The ministry operates three nurseries for the production of tree seedlings for the SBFEP and other ministry needs. Most seedlings planted in the province are grown in private sector nurseries.

Research Program

The Research Program provides the ministry with the scientific knowlege and methods needed to achieve its objectives effectively and efficiently.

A broad goal for the next five years is to increase cooperation with other research agencies, industry and the province's three universities. A specific, related goal is the construction of a new $7.8 million research facility at the University of Victoria by 1991.

The research goals of the program are numerous, technical and extremely varied. They address three key problem areas: forest renewal, integrated resource management and forest productivity. Some past and ongoing examples are: saving millions of dollars in seedling shipping costs, by applying special mathematical techniques to nursery planning; maintaining both wildlife and timber harvests worth many jobs and millions of dollars, by developing special timber harvesting techniques that maintain necessary wildlife habitat; and, increasing timber volume production of coastal Douglas-fir through genetic improvement.

The program includes the activities of the Research Branch in Victoria and research personnel at the region offices, three research stations and a laboratory. Activities include research, communication and extension services.

Forecast expenditure for 1989/90 is $10 million. In addition, the Research Program will administer FRDA research expenditures of $6 million for the Silviculture Program.

Protection Program

The Protection Program reduces damage by wildfire, insects and diseases to the forest and range resources. Protection of private property and human life, especially in the wildland/rural interface areas, and the maintenance of environmental values are also provided.

The overall goals are to keep the area burned by wildfire below 69 000 ha and the timber volume lost to wildfire below 2.6 million m^3 each year.

The program includes the activities of the Protection Branch in Victoria and protection personnel at the region and district offices. Pest management activities are coordinated with the activities of the Silviculture, Harvesting and Small Business Forest Enterprise Programs.

Bark beetles and other pests are destroying or damaging vast areas of forests and rangelands. Efforts to control them, addressed in previous five year programs, will continue with an expenditure of $4 million in 1989/90.

Forecast expenditure for the Protection Program for 1989/90 is $17 million. This is lower than in previous years, because expenditures for fire preparedness were shifted to the Fire Suppression Program.

Fire Suppression Program

The Fire Suppression Program provides fire-fighting services for the control of wildfires. The program is linked closely to, and supported by, the Protection Program, but is managed and funded separately.

Program expenditure depends on the severity of the fire seasons. Contracts for air tankers, helicopters and heavy equipment, and fire fighter wages are the main expenses.

New inititiatives in this five year resource program include employment of highly trained 20-man crews that are five times as effective as traditional firefighters, and the movement of personnel and equipment to high risk areas in anticipation of potential fires. Advanced computer technology is used to find these high risk areas.

Forecast expenditure for 1989/90 is $50 million.

MANAGEMENT SERVICES PROGRAM

The Management Services Program provides the ministry's basic infrastructure. This includes the minister's office, all senior managers, and the ministry's administrative, financial, personnel, computing, technical and mechanical services.

At headquarters in Victoria, the program includes senior management and the activities of the Industry Development and Marketing, Audit Services, Public Affairs, Legal Services, Financial Services, Human Resources, Information Systems, and Technical and Administrative Services Branches. At the region and district offices, it includes senior management and the activities of administrative and technical support personnel.

Forecast expenditure for 1989/90 is $93 million.

THE ROLE OF THE PRIVATE SECTOR

Wherever possible, the ministry engages the private sector to implement programs approved by the government. While the role of the private sector will continue to increase, the government will continue to maintain control of the resources.

The private sector carries out many activities, such as planting on Crown land, under contract to the ministry. It also provides communications and other services which help the ministry operate efficiently. The ministry monitors the performance of the private sector contractors.

PART 4: SUMMARY

The ministry's total forecast expenditure for 1989/90 is $558 million.

This consists of $461 million for the Forest and Range Resource Program, $94 million for the Management Services Program and $3 million for the replacement of commercial timber within the national park reserve on South Moresby Island.

The new directions in forest policy described in last year's forest and range resource program for 1988-1993 have been incorporated in this resource program.

The Small Business Forest Enterprise Program has been separated from the Harvesting Program, reflecting its increased significance and funding through a separate account.

The funding of the Integrated Resource Management Program has increased substantially, reflecting the ministry's commitment to the principles of resource stewardship and integrated resource management.